

## Section 2. Form PTO - 1449 (Modified) (ATTACHMENT)



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FORM PTO-1449 U.S. DEPT. OF COMMERCE (Modified) PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. Bti-39	SERIAL NO. 09/103,429
	APPLICANT Robert R. Granados	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	FILING DATE 06/24/98	GROUP 1638

## U.S. PATENT DOCUMENTS

Exam Initial		DOCUMENT NUMBER	DATE	PATENTEE	CLASS	SUB	FILING DATE IF APPROPR
	AA						
	AB						

## FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

Exam Initial		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB	TRANSLATION YES   NO
	AL						

## OTHER PRIOR ART

Exam Initial		Author, Title, Date, Pertinent Pages, Etc
MAE	AR	Adang, M. J. and Spence, K. D. (1983) Permeability of the peritrophic membrane of the Douglas fir tussock moth ( <i>Oroyia pseudotsugatq</i> ). <i>Comparative Biochemical Physiology</i> 75, 233-238.
	AS	Barbehenn, R. V. and Martin, N. M. (1995) Peritrophic envelope permeability in herbivorous insects. <i>Journal of Insect Physiology</i> 41, 303-311.
	AT	Begon, M.; Daud, K.B.H.; Young, P. and Howells, R.E. (1993) The invasion and replication of a granulosis virus in the indian meal moth <i>Plodia interpunctella</i> : an electron microscope study. <i>Journal of Invertebrate Pathology</i> 61(3), 281-295.
	AU	Brandt, C. R., Adang, M. J. and Spence, K. D. (1978) The peritrophic membrane: ultrastructural analysis and function as a mechanical barrier to microbial infection in <i>Orygia pseudotsugata</i> . <i>Journal of Invertebrate Pathology</i> 32, 12-24.
	AV	Corsaro, B. G., Gijzen, M., Wang, P. and Granados, R. R. (1993) Baculovirus enhancing proteins as determinants of viral pathogenesis. In "Parasites and Pathogens of Insects Volume 2.- Pathogens", pp. 127-145. Academic Press, Inc., New York.
	AW	Derksen, A.C.G. and Granados, R. R. (1988) Alteration of a lepidopteran peritrophic membrane by baculoviruses and enhancement of viral infectivity. <i>Virology</i> 167, 242-250.
	AX	Faulkner, P.; Kuzio, J.; Williams, G.V. and Wilson, J.A. (1997) Analysis of p74, a PDV envelope protein of <i>Autographa californica</i> nucleopolyhedrovirus required for occlusion body infectivity. <i>Journal of General Virology</i> 78, 3091-3100.

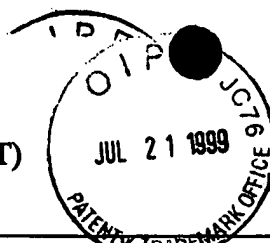
MAI	AY	Gallo, L. G., Corsaro, B. G., Hughes, P. R. and Granados, R. R. (1991) In vivo enhancement of baculovirus infection by the viral enhancing factor of the granulosis virus of the cabbage looper, <i>Trichoplusia ni</i> (Lepidoptera: Noctuidae) <i>Journal of Invertebrate Pathology</i> 58, 203-210.
/	AZ	Gijzen, M.; Roelvink, P. and Granados, R. (1995) Characterization of viral enhancing activity from <i>Trichoplusia ni</i> granulosis virus. <i>Journal of Invertebrate Pathology</i> 65(3), 289-294.
/	BA	Hawtin, R.E.; Zarkowska, T.; Arnold, K.; Thomas, C.j.; Gooday, G.W.; King, A.A.; Kuzio, J.A. and Possee, R.D. (1997) Liquefaction of <i>Autographa californica</i> nucleopolyhedrovirus-infected insects is dependent on the integrity of virus-encoded chitinase and cathepsin genes. <i>Virology</i> 238(2), 243-253.
/	BB	Hughes, P.R., van Beek, N.A.M. and Wood, H.A. (1986) A modified droplet feeding method for rapid assay of <i>Bacillus thuringiensis</i> and baculoviruses in Noctuid larvae. <i>Journal of Invertebrate Pathology</i> 48, 187-192.
/	BC	Lehane, M. J. (1997) Peritrophic matrix structure and function. <i>Annual Review of Entomology</i> 42, 525-550.
/	BD	Lepore, L. S., Roelvink, P. R. and Granados, R. R. (1996) Enhancin, the granulosis virus protein that facilitates nucleopolyhedrosis virus (NPV) infections, is a metalloprotease. <i>Journal of Invertebrate Pathology</i> 68, 131-140.
/	BE	Miller, N. and Lehane, M. J. (1990) <i>In vitro</i> perfusion studies on the peritrophic membrane of the tsetse fly <i>Glossina moristans moristans</i> (Diptera, Glossinidae). <i>Journal of Insect Physiology</i> 36, 813-818.
/	BF	Miller, N. and Lehane, M. J. (1993) Ionic environment and the permeability properties of the peritrophic membrane of <i>Glossina moristans moristans</i> , <i>Journal of Insect Physiology</i> 39, 139-144.
/	BG	Peters, W. and Wiese, B. (1986) Permeability of the peritrophic membranes of some Diptera to labeled dextrans. <i>Journal of Insect Physiology</i> 32, 43-50.
/	BH	Richards, A. G. and Richards, P. A. (1977) The peritrophic membranes of insects. <i>Annual Review of Entomology</i> 22, 219-240.
/	BI	Sakurada, M.; Morgavi, D.P.; Komatani, K.; Tomita, Y. and Onodera, R. (1996) Purification and characteristics of cytosolic chitinase from <i>Piromyces communis</i> OTS1. <i>FEMS Microbiology Letters</i> 137(1), 75-78.
/	BJ	Santos, C. D. and Terra, W. R. (1986) Distribution and characterization of oligomeric digestive enzymes from <i>Erimyia ello</i> larvae and inferences concerning secretory mechanisms and the permeability of the peritrophic membrane. <i>Insect Biochemistry</i> 16, 691-700.
/	BK	Spence, K. D. and Kawata, M. Y. (1993) Permeability characteristics of the peritrophic membranes of <i>Manduca sexta</i> larvae <i>Journal of Insect Physiology</i> , 39, 785-790.
/	BL	Tanada, H. (1985) A synopsis of studies on the synergistic property of an insect baculovirus: a tribute to Edward A. Steinhaus. <i>Journal of Invertebrate Pathology</i> 45, 125-138.
/	BM	Tellem, R. (1996) The peritrophic matrix. In "The Insect Midgut", (M. J. Lehane and P. F. Billingsley, Eds.), Chapman and Hall, London.
/	BN	Wang, P. and Granados, R.R. (1997a) An intestinal mucin is the target substrate for a baculovirus enhancin. <i>Proceedings of the National Academy of Science, USA</i> 94, 6977-6982.
/	BO	Wang, P. and Granados, R. R. (1997b) Molecular cloning and sequencing of a novel invertebrate intestinal mucin Cdna. <i>Journal of Biological Chemistry</i> 272, 16663-16669.
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MAI	BP	Wang, P. and Granados, R. R. (1998) Observations on the presence of the peritrophic membrane in larval <i>Trichoplusia ni</i> , and its role in limiting baculovirus infection. <i>Journal of Invertebrate Pathology</i> , 72, pp 57-62
/	BQ	Wang, P. Hammer, D. A. and Granados, R. R. (1994) Interaction of enhancin, a viral encoded protein, from the granulosis virus of <i>Trichoplusia ni</i> with the midgut epithelium and peritrophic membrane of four lepidopteran insects. <i>Journal of General Virology</i> 75, 1961-1967.
/	BR	Woltersberger, M. G., Spaeth, D. D. and Dow, J. A. T. (1986) Permeability of the peritrophic membrane of tobacco hornworm larval midgut. <i>American Zoologist</i> 26, 76A.
✓	BS	Zimmerman, D. and Mehlan, D. (1976). Water transport across peritrophic membranes of <i>Calliphora erythrocephala</i> -VII. <i>Comparative Biochemistry and Physiology</i> 55, 119-126.
EXAMINER		DATE CONSIDERED
Medina A. Ibrahim		02/3/2000

## Section 2. Form PTO - 1449 (Modified) (ATTACHMENT)



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FORM PTO-1449 U.S. DEPT. OF COMMERCE (Modified) PATENT AND TRADEMARK OFFICE	APPY DOCKET NO. BTI-39 CIP	SERIAL NO. 09/294,663
	APPLICANT Granados et al	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	FILING DATE 4/19/99	GROUP 1632

## U.S. PATENT DOCUMENTS

Exam Initial		DOCUMENT NUMBER	DATE	PATENTEE	CLASS	SUB	FILING DATE IF APPROPR
	CA	4,609,893					
	CB	4,713,325					
	CC	4,714,681					
	CD	4,716,117					
	CE	4,720,459					
	CF	4,716,111					
	CG	5,128,460					
	CH	5,686,600					

## FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

Exam Initial		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB	TRANSLATION YES   NO
	CI	EP 466222-A		European			
	CI	EP 412911 A		European			
	CK	EPA 0359472		European			
	CL	EPA 0193259		European			
	CM	EPA 0451878A1		European			
	CN	EPA 0385962		European			
	CO	WO 93/09130		PCT			
	CP	WO 91/06320		PCT			
	CQ	WO 91/16432		PCT			

## OTHER PRIOR ART

Exam Initial		Author, Title, Date, Pertinent Pages, Etc
	CR	Casu <i>et al.</i> (Proc. Natl. Acad. Sci. U.S.A., 94, 8939-8944)
	CS	Tellam and Eisemann's injection protocol is used (Int. Parasitology, 28, 439-450)
	CT	Ed Harlow and David Lane (eds.) Antibodies, A Laboratory Manual, Cold Spring Harbor Laboratory, N.Y. (1988)
	CU	Kennett, R., et al. Monoclonal Antibodies, Hybridoma: A New Dimension in Biological Analyses, Plenum Press, N.Y. (1980)
	CV	Campbell, A. "Monoclonal Antibody Technology," In Laboratory Techniques in Biochemistry and Molecular Biology, Vol. 13, Burdon et al. (eds.), Elsevier, Amsterdam (1984)
	GW	Jones, S. T. and Bendig, M., 1991, Bio/technology 9:88-89
	CX	Lamb et al. (1985) Eur. J. Biochem. 148:275-170 (Ricin);
	CY	Gray et al. (1984) PNAS 81:2645-2649 (Pseudomonas toxin DNA Sequence
	CZ	Hindley and Berry (1988) Nuc. Acids Res. 16:4168 (B. sphaericus toxin gene);

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DA	Bauman et al. (1988) J. Bacteriol 170:2045-2052
DB	Bauman et al. 1987) J. Bacteriol 169:4061-4067,
DC	Berry and Hindley (1987) Nucleic Acids Res. 15:5891,
DE	Herrnstadt et al. (1987) Gene 57:37-46 (cryIB)
DF	Brizzard and Whiteley (1988) Nucleic Acids Res. 16:2723-2724 (cryIB
DG	Geiser et al. (1986) Gene 48:109-118 (cryIA(b)).
DH	Porter et al. (1993) Microbiological Reviews 57:838-861
DI	Hofte and Whiteley (1989) Microbiological Reviews 53:242-255
DJ	Hiatt et al. (1989) Nature 342:76-78
DK	During et al. (1990) J. Plant Molecular Biology 15:281-293
DN	Guerche et al., (1987) Plant Science 52:111-116;
DO	Neuhaus et al., (1987) Theor. Appl. Genet. 75:30-36;
DP	Klein et al., (1987) Nature 327:70-73;
DQ	Howell et al., (1980) Science 208:1265;
DR	Horsch et al., (1985) Science 227:1229-1231
DS	DeBlock et al., (1989) Plant Physiology 91:694-701
DT	Perlak et al. (1991) Proc. Natl. Acad. Sci. USA 88:3324-3328
DU	Murray et al., (1989) Nucleic Acids Research 17:477-498
DV	Guerineau et al., (1991), Mol. Gen. Genet., 226:141-144
DW	Proudfoot, (1991), Cell, 64:671-674;
DX	Sanfacon et al., (1991), Genes Dev., 5:141-149;
DY	Mogen et al., (1990), Plant Cell 2:1261-1272
DZ	Munroe et al., (1990), Gene, 91:151-158;
EA	Ballas et al., (1989), Nucleic Acids Res., 17:7891-7903;
EB	Joshi et al., (1987), Nucleic Acid Res., 15:9627-9639
EC	Joshi, C. P., (1987, plant translational consensus sequences, Nucleic Acids Research, 15:6643-6653),
ED	Luehrsen and Walbot, (1991), introns, Mol. Gen. Genet., 225:81-93

EXAMINER

DATE CONSIDERED

Medina A. Ivrah

02/04/00